

No. 65. ♀ (!), Karaginski Island, August 22 or 23, 1897.

The Kamchatkan bird is referred by Dr. Stejneger to the subspecies *B. f. leucostriatus* Homey., but he puts forward the suggestion that when its migration is thoroughly known it will be found to be an isolated form having no connection with the Alaskan *Budytes*.

MOTACILLA MELANOPE Pallas.

No. 66. ♂, Avacha Bay, July 17, 1896. Colour of bill and iris dark; of legs and feet fleshy horn; of claws horn.

MOTACILLA OCULARIS Swinhoe.

No. 67. Unsexed, Karaginski Island, August 22 or 23, 1897. Colour of bill dark horn, the base of the lower mandible lighter; of gape light yellow; of legs, feet, and claws black.

PHYLLOSCOPUS BOREALIS (Blasius).

No. 68. Unsexed, Karaginski Island, August 22 or 23, 1897. Colour of bill dark horn; of legs and feet light horn.

ERITHACUS CALLIOPE (Pall.).

No. 69. Unsexed, Karaginski Island, August 23, 1897. Colour of bill and legs horn.

XV.—On *Estrelata mollis* (Gould) and the Allied Species living at Madeira and the Cape Verde Islands. By T. SALVADORI, C.M.Z.S.

IN the 'Annals and Magazine of Natural History,' vol. xiii. p. 363 (1844), Gould described a *Procellaria mollis*, which he had found very common in the Southern Seas between the 20th and 40th deg. S. lat. In the same year, G. R. Gray (Gen. B. iii. p. 648) expressed an opinion that the bird described by Gould was the same as *Procellaria melanopus* Gm.

S. N. i. p. 562, no. 16 (ex Latham's Black-toed Petrel); but this identification is far from being satisfactorily established.

Mr. Gould, in 1848, included in his 'Birds of Australia' also *P. mollis*, writing as follows:—"Although I have not seen it within sight of the shores of Australia, it doubtless occasionally visits them, for I observed it to be plentiful off the eastern end of the Islands of St. Paul and Amsterdam." These islands being quite in the middle of the Indian Ocean, Gould's surmise appears rather hazardous; still, from subsequent evidence, it seems that he was right.

In 1855, E. Vernon-Harcourt, in his paper, "Notes on the Ornithology of Madeira," included *P. mollis*, and all subsequent writers down to Salvin (Cat. B. Brit. Mus. vol. xxv.) and Dresser (Suppl. to the 'Birds of Europe'), treating of *P. mollis*, have admitted the specific identity of the specimens from Madeira with those from the Southern Seas.

Having had quite recently the opportunity of studying a collection of birds from the Cape Verde Islands, sent by the well-known traveller Signor Leonardo Fea, I found two specimens, exactly alike, of the genus *Æstrelata*, belonging to a species unknown to me, as, though resembling *Æ. mollis*, they appeared to me to be specifically different. Signor Fea had written on the label of one of the specimens that they belong to an uncommon species, but resident in the islands, known to the natives as "Gon-gon."

It occurred to me that the Cape Verde Islands bird might probably be of the same species as that of Madeira; and wishing to ascertain this point I wrote to Prof. A. Newton, asking him to send me for inspection two specimens collected in Madeira in 1853 by Dr. Frere, belonging to the Museum of Cambridge. On receiving these two birds their specific identity with those from the Cape Verde Islands was quite obvious. These four North-Atlantic specimens I was able to compare with four southern ones of *Æ. mollis*, three collected during the voyage of the 'Magenta' (Gigl. et Salvad., Atti Soc. Ital. Sc. Nat. xi. (1868), p. 457; iid. Ibis, 1869, p. 66), and a fourth from the seas off the Cape of Good Hope, received from Verreaux by the late

Count Turati—the last being an immature bird, while the three others are fully adult.

The comparison of these specimens shows quite clearly that the southern birds are smaller, have constantly the grey pectoral band, more or less pronounced, and have the sides of the body less freckled with grey. The northern birds are larger, have no grey band across the breast, and the sides of the body more freckled with grey.

It seems also that the habits of the two species are different: the southern birds being quite pelagic, while the northern birds, according to Signor Fea's statements, are more nocturnal, resorting to their stony furrows on the mountains at day, and going to sea at night.

Convinced of the specific value of the differences pointed out, I have accordingly named the northern bird *Æstrelata fea* (see p. 302).

I add the full synonymy and the descriptions of the two species, together with some remarks on their geographical distribution.

(*ÆSTRELATA MOLLIS* (Gould)).

Procellaria mollis Gould, Ann. N. H. xiii. p. 363 (20th to 40th deg. S. lat.) (1844); id. B. Austr. vii. pl. 50 (1848); Rehn. Nov. ad Syn. Av. *Natatores*, t. 25. ff. 2606-7 (ex Gould) (Dec. 1850); Licht. Nom. Av. p. 100 (Süd-See) (1854); Layard, Ibis, 1862, p. 98 (lat. 44° S., long. 138° E.); Schleg. Mus. P.-B., *Procellaria*, p. 11 (Mer de l'Australie) (1863); Pelz. Reise 'Novara,' Zool. i. Vög. p. 146 ("Indischer Ocean, gegen St. Paul zu, ? Stiller Ocean, nächst Neu-Seeland") (1865); Hutton, Ibis, 1865, p. 287 (S. Ocean), 1867, pp. 188, 191 (between lat. 35° 40' S., long. 4° 28' W., and lat. 39° 30' S., long. 25° E.); ? Finsch, J. f. Orn. 1870, p. 373 (part. ex Pelzeln); ? Hutton, Cat. B. New Zeal. p. 47 (1871); Layard, Ibis, 1872, p. 337 (lat. 8° 40' N., long. 34° 31' W.); Finsch, J. f. O. 1872, p. 255; Buller, Hist. B. of New Zeal., Introd. p. xv (1873); Finsch, J. f. O. 1874, p. 207; Cab. et Rehnw. J. f. O. 1876, p. 329 (part., lat. 32° 11' N., long. 59° 41' E., lat. 33° 26' S., long. 79° 42' E.); Gieb. Thes. Orn. iii. p. 306 (syn. emend.) (1877).

Procellaria melanopus G. R. Gr. Gen. B. iii. p. 648, no. 5 (1844) (nec Gm. ? *); id. List Anseres Brit. Mus. p. 164 (1844).

Cookilaria mollis Bp. Consp. ii. p. 190 (1855) (syn. emend.); Giglioli, Viaggio Magenta, pp. 106, 736, 800 (1875).

Rhantistes mollis Bp. Compt. Rend. xlii. p. 786, no. 25 (1856).

Æstrelata mollis Gould, Handb. B. Austr. ii. p. 453 (1865); Coues, Pr. Ac. Philad. 1866, pp. 150, 170; Gigl. & Salvad. Atti Soc. Ital. Sc. Nat. xi. p. 457 (1868); iid. Ibis, 1869, p. 66; Gigl. Fauna Vert. Oceano, pp. 42, 82 (lat. 42° 47' S., long. 3° 26' E.—lat. 40° 42' S., long. 53° 20' E. (1870); Ridgw. Man. N. Am. B. p. 63 (1887).

Fulmarus (Cookilaria) mollis G. R. Gray, Haud-list, iii. p. 107, no. 10897 (1871).

Æstrelata mollis Sharpe, Phil. Trans. clxvii. p. 128 (1877); Eaton, ibid.; Salvin, Ibis, 1877, p. 480 (critical); id. P. Z. S. 1878, p. 738 (Nightingale I.); id. Voy. 'Chall.,' Zool. ii. pt. viii. p. 144 (1881); ? Layard, Ibis, 1882, pp. 539, 544 (New Caledonia, breeding); Sharpe, ed. Layard's B. of S. Afr. p. 766 (seas off the Cape) (1884); Buller, Hist. B. of New Zeal. (2nd ed.) ii. p. 222 (1888); ? id. Tr & Pr. New Zeal. Inst. xxiii. p. 41 (1891) (Sunday I., Kermadec Group?, and Otago); Salvin, Cat. B. Brit. Mus. xxv. p. 406 (part.) (1896); Sharpe, Hand-list Gen. & Spec. of B. i. p. 125, no. 9 (partim: Southern Ocean) (1899); Hall, Ibis, 1900, p. 24 (Kerguelen I.).

Pterodroma (Æstrelata) mollis Ramsay, Pr. Linn. Soc. N. S. W. ii. p. 202, no. 710 (Tab. List B. Austr. p. 26, no. 710) (Tasmania?) (1878).

* It is extremely doubtful whether the following references belong to *Æ. mollis*:

Black-toed Petrel Lath. Syn. iii. 2, p. 408, no. 12 (North America); Penn. Arct. Zool., Suppl. p. 73; Lath. Gen. Hist. x. p. 185.

Procellaria melanopus Gm. S. N. i. p. 562, no. 16 (1788) (ex Latham); Lath. Ind. Orn. ii. p. 824, no. 12 (1790); Bonn. Enc. Méth. i. p. 79, no. 15 (1790); Vieill. N. D. xxv. p. 420 (1817).

Puffinus? melanopus Steph. in Shaw, Gen. Zool. xiii. pt. 1, p. 231 (1826).

Æstrelata philippi Saunders (nec Gr.), P. Z. S. 1880, p. 164 (lat. $37^{\circ} 59' S.$, long. $29^{\circ} 18' E.$).

Minor; supra fusco-cinerea, alis obscurioribus; fronte albo-varia; corpore subtus albo, sed fascia pectorali transversa cinerea ornato; lateribus vix cinereo variis. Long. tot. circa mm. 330; al. 255; caud. 105; tarsi 32; rostri culm. 28-29.

Hab. in Oceano Atlantico et Indico australi.

This species is confined to the Southern Seas, especially the Southern Atlantic and Southern Indian Oceans, between the 20th and the 50th parallels; the most western point where it has been found being Nightingale Island, near Tristan da Cunha. In the Indian Ocean it probably lives round Kerguelen Island; by Gould it is mentioned from the seas off the eastern end of St. Paul and Amsterdam Islands; in the British Museum there is one specimen from North-west Australia and others (doubtfully) from South Australia. Prof. Giglioli, during the voyage of the 'Magenta,' met with this species between latitudes $42^{\circ} 47'$ and $40^{\circ} 42' S.$ and longitudes $3^{\circ} 26'$ and $53^{\circ} 20' E.$, and again in the South Australian seas from lat. $37^{\circ} 22' S.$, long. $112^{\circ} 5' E.$, nearly to the entrance of Port Phillip.

The presence of *Æ. mollis* in the seas north of New Zealand is open to doubt, and I should say that the specimens from New Caledonia—where, according to Layard, *Æ. mollis* breeds on Mount Mon—also require comparison.

ÆSTRELATA FEE, Salvad.

Procellaria mollis Harcourt (nec Gould), Ann. & Mag. N. H. xx. p. 438 (Madeira) (1855); Newt. Ibis, 1863, p. 186 (Madeira); Harting, J. f. O. 1886, p. 457.

Æstrelata mollis Dalgleish, Ibis, 1890, p. 386 (Ilha de Baixo, off Porto Santo); Hartwig, Ornith., vii. pp. 181 (Porto Santo), 187 (Deserta Grande) (1891); id. J. f. O. 1891, p. 433; Dalgleish, Pr. R. Phys. Soc. Edinb. xi. p. 29 (Ilha de Cal, Deserta Grande) (1892); Hartwig, J. f. O. 1893, pp. 11 (Desertas), 12; Salv. Cat. B. Brit. Mus. xxv. p. 406 (part., Madeira*) (1896); Dresser, Suppl. to B. of Eur.

* In the British Museum there are no specimens of *Æ. mollis* or of *Æ. fea* from Madeira.

p. 411 (partim), pl. 721 (figura optima) (Madeira) (1896); Sharpe, Hand-list Gen. & Species of B. i. p. 125, no. 9 (part., Madeira) (1899).

“*Gon-gon*” of the inhabitants of São Nicolao, Fea, Boll. Soc. Geogr. Ital. (3) xii. p. 23 (Cape Verde I.) (1899).

Æstrelata feæ Salvad. Ann. Mus. Civ. Gen. (2) xx. p. 305 (Cape Verde I.) (1899).

Æstrelata Æ. molli (Gould) simillima, sed major, corpore subtus albo, haud fascia pectorali cinerea ornato, lateribusque magis griseo variis, diversa.

Supra fusco-grisea; collo postico et laterali, dorso, et scapularibus anterioribus magis grisescentibus, plumarum marginibus griseis; supracaudalibus griseis, lateralibus ad apicem albo variis; plumis frontis albo marginatis; macula ante- et suboculari nigricante; loris antice, parte ima genarum, mento, gula, collo antico, pectore, abdomine, et subcaudalibus albis; plumis colli laterum fusco-cinereis albo limbatis; lateribus corporis et axillaribus anterioribus tenuissime cinereo marmoratis: alis fuscis, tectricibus majoribus griseo tinctis; remigibus in pogonio interno vix pallidioribus; axillaribus longioribus fusco-cinereis, fere concoloribus: cauda cinerea, reetricibus externis, præcipue extima, albo punctulatis: rostro nigro; tarsis et parte basali digitorum cum membrana interdigitali pallidis (albidis?); pedibus aliter nigris. Long. tot. circa mm. 380; al. 280; caud. rectr. med. 110, rectr. ext. 77; rostri culm. 30; tarsi 33; digiti ext. cum ungue 35.

Hab. in Oceano Atlantico boreali, circa ins. Madeiram et Cape Verde dictas.

Most probably *Æ. feæ* is confined to the islands off the western coast of Africa, north of the Equator. Up to the present time it has been found only on the small islands round Madeira, and quite recently by Signor Leonardo Fea in the Cape Verde Islands; but it is not unlikely that it will be met with also on some of the Canaries, where it may have escaped notice on account of its nocturnal habits.

From what we know of the geographical distribution of the two allied species, *Æ. mollis* and *Æ. feæ*, it appears that the first not only never crosses the Equator, but has never been found north of the 20th or perhaps of the 30th parallel, so that the areas of the two species are widely separated.